6.0. DATA REQUIREMENTS FOR
REVISED PERLND MODULE

The following material is taken from the Hydrocomp/Aqua Terra conceptual design report (Aug. 1995) for the proposed HSPF PERLND upgrades and is subject to change. This revised code may continue to evolve as it is applied to different watersheds. Documented changes for additional input parameters apply to Section PWATER.

6.1. Tabular Data

6.1.1. Table PWAT-PARM1

This table contains an additional flag to use the new routines for simulating high water table/low land surface gradient conditions.

6.1.2. Table PWAT-PARM6

MELEV
This parameter is the mean surface elevation of the land segment. Units are feet or meters.

BELV
This parameter is the base elevation for active groundwater outflow. It corresponds to the bottom elevation of nearby channels; therefore, if the ground water elevation is above BELV, there is outflow into the channels. Ground water below BELV is considered inactive. Units are feet or meters.

PCW
This parameter is the cohesion water porosity. It is the soil pore space in micropores.

PGW
This parameter is the gravitational water porosity. It is the soil pore space in macropores.

UPGW
This parameter is the upper gravitational water porosity. It is the macropore space in the upper layers of the soil column.

6.1.3. Table PWAT-PARM7

IFWSC
This parameter is the maximum interflow storage capacity when the groundwater elevation is greater than the Upper Influence Elevation. Units are inches or mm.

SRRC   This parameter is the surface runoff recession constant. It is used to calculate surface runoff as a function of surface storage only. Units are 1/hr.

SREXP   This parameter is the surface runoff exponent.

DELTA   This parameter is the ground water tolerance level used to determine transition between regions when high water table conditions are being simulated. It is used to smooth out jumps in ground water elevation due to changes in "soil region."

6.1.4. Table PWAT-STATE1

This table is used to specify the initial water storages. The storages have the same meaning as the previous PWATER definition, except for AGWS.

AGWS   This parameter is the active groundwater storage. When high water table/low gradient conditions are being simulated AGWS is the total groundwater storage, i.e., the storage above the datum for BELV (typically sea level). Units are inches or mm.